

Title (en)
Broadband phase shifter and vector modulator.

Title (de)
Breitbandphasenschieber und Vektormodulator.

Title (fr)
Déphaseur à large bande et modulateur vectoriel.

Publication
EP 0519170 A1 19921223 (EN)

Application
EP 92105678 A 19920402

Priority
US 71638791 A 19910617

Abstract (en)
A broadband phase shifter and vector modulator includes two artificial transmission lines interconnected by FETs to selectively produce and sum incremental phase shifts of an input signal. A number of low pass filter sections are connected in series to form the first of the two artificial transmission lines and a number of high pass filter sections are connected in series to form the second artificial transmission line. Use of low pass and high pass filters equalizes transit times of each phasor through the phase shifter so as to maintain the proper phase relationship between the phasors over a broad bandwidth. Each of the two artificial transmission lines are coupled to a transistor circuit connecting corresponding low and high pass filter sections. The phase shifter operates by selectively summing the output variable-amplitude phase-shifted signals generated within the transmission lines to produce an output signal having a phase shift between 0 DEG and 360 DEG . <IMAGE>

IPC 1-7
H01Q 3/26; **H03F 1/18**; **H03F 3/60**; **H03H 11/22**

IPC 8 full level
H01Q 3/36 (2006.01); **H01Q 3/26** (2006.01); **H03C 3/00** (2006.01); **H03F 1/18** (2006.01); **H03F 3/60** (2006.01); **H03H 11/20** (2006.01); **H03H 11/22** (2006.01)

CPC (source: EP KR US)
H01Q 3/2682 (2013.01 - EP US); **H03C 3/00** (2013.01 - KR); **H03F 1/18** (2013.01 - EP US); **H03F 1/223** (2013.01 - EP US); **H03F 3/607** (2013.01 - EP US); **H03H 11/22** (2013.01 - EP US)

Citation (search report)
• [A] EP 0220403 A1 19870506 - SIEMENS AG [DE]
• [A] US 4595881 A 19860617 - KENNAN WAYNE [US]
• [A] US 4788509 A 19881129 - BAHL INDER J [US], et al
• [AD] Proceedings of the IEEE GaAs IC symposium, 1983, pgs 109-112, New York, USA. Eric W. Strid: "A MONOLITHIC 10-GHz VECTOR MODULATOR."

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EP 0519170 A1 19921223; **EP 0519170 B1 19970625**; CA 2064327 A1 19921218; CA 2064327 C 19991012; DE 69220545 D1 19970731; DE 69220545 T2 19971009; JP 3128671 B2 20010129; JP H0669753 A 19940311; KR 100206627 B1 19990701; KR 930001561 A 19930116; US 5168250 A 19921201

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